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DECISION NOTICE

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FINDING OF NO SIGNIFICANT IMPACT

FRENCH GULCH ENVIRONMENTAL ANALYSIS

Deer Lodge Ranger District
Deerlodge National Forest

Granite and Powell Counties, Montana

INTRODUCTION

The French Gulch Environmental Assessment (EA) for vegetation management, including a timber sale, was completed and is available for review at the Philipsburg Ranger District, the Deer Lodge Ranger District, and the Forest Supervisor's Office. Also available is a letter which provides supplementary information to the EA and which should be considered part of the EA.

The EA documents the analysis completed for Forest Plan implementation of managing vegetation within the project area. The management actions include timber harvest, understory burning, tree planting, temporary road construction, road reconstruction, and restrictions on motor vehicles. The EA analyzed different alternatives to determine how, when, and where the proposed activities could be implemented on a site-specific basis during the next several years. These management actions will help achieve desired future conditions identified in the North Flints Landscape Ecology Unit (LEU) analysis.

Project Location

The project area includes portions of the Gold, Dunkleberg, and Flint Creek watersheds, and includes portions of Pioneer Gulch, Crevice, Blum, Griffin, and Gaskill Creeks. The project area encompasses an area of approximately 14,700 acres, and includes sections 13-15 and 22-26, T.9 N., R.12 W; sections 17-20, 28-30, 33, and 34, T.9 N., R.11 W; and section 4, T.8 N., R.11 W. In addition, portions of the following sections are included: sections 21, 27, 28, and 34-36, T.9 N., R.12 W.; and sections 31 and 32, T.9 N, R.11 W. A project area vicinity map, Figure I-1, is located in the EA. The project area is a part of the North Flints LEU, which encompasses an area of approximately 46,000 acres and is displayed in the EA as Figure III-1.

Range of Actions

The North Flints LEU analysis describes the existing condition of the various resources over the landscape, explores the range of natural variability, and identifies desired conditions. The "coarse filter approach" was used in the analysis. The site-specific French Gulch EA identifies a range of actions which move the project area toward the desired condition.

This EA includes proposals to harvest timber using even-aged silvicultural systems (clearcut, shelterwood, commercial thin, and variations of these using reserve trees). Specific treatments are designed to meet silvicultural and other land management objectives and to be responsive to public comments. Road construction and reconstruction to access some of the timber stands will be required and are considered to be connected actions to the proposed timber harvesting.

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Activities associated with the proposal to harvest timber include site preparation after harvest for natural regeneration and fuel hazard reduction of the debris after harvest. Site preparation and fuel reduction will utilize both dozer piling and understory burning to achieve specific unit objectives.

Other vegetation management activities include understory burning and tree planting outside of the harvest areas. These treatments are designed to meet land management objectives in the Forest Plan and the North Flints LEU analysis.

The action alternatives incorporate varying seasonal and year-long restrictions on motor vehicle use on existing roads as a means to achieve travel management objectives. The roads considered are within the French Gulch project area and North Flints LEU.

All timber harvest actions are within Management Areas E1 and D2 (MA E1 and MA D2) of the Deerlodge National Forest Plan, and implementation is scheduled to begin during fiscal year 1993.

Purpose and Need for Action

The purpose and need for action under this proposal are:

1. **Maintain a stand structure in the Douglas-fir zone that resembles large, contiguous, open-grown stands of timber. This includes the maintenance of ponderosa pine old growth and associated wildlife communities. This purpose includes the following components:**

    - **Reduce catastrophic fire risk in stands (both previously harvested and unharvested) with high fuel loadings, as well as the larger Douglas-fir vegetative community.**
    - **Encourage re-establishment of both quaking aspen and ponderosa pine.**
    - **Reduce the present spruce budworm and Douglas-fir beetle risk.**
    - **Increase/Improve forage for domestic livestock and ungulates.**

The proposed action would maintain an overstory consisting of ponderosa pine and Douglas-fir while reducing the understory component. Historically, fire periodicity was from 10 to 30 years, which carried a park-like stand structure. The proposal would maintain portions of the Douglas-fir zone in a condition that is more resistant to fires of varying intensities, promote vegetative components that evolved ecologically with disturbance, reduce risk of insect infestations, and increase forage. This change in stand structure would be accomplished with commercial thin harvest actions and understory burning.

The understory burning would further reduce the fire risk by reducing the dead and/or downed woody material and a portion of the Douglas-fir understory. These actions would reduce the likelihood of timber losses from wildfire. Minimizing timber losses from fire would contribute to achievement of Forest Plan management goals and objectives for the timber suitable lands in the project area. In addition, the proposed actions of timber harvest and understory burning were designed to provide a contiguous fire break between private and Forest Service lands.

The proposal would encourage the re-establishment of ponderosa pine and quaking aspen through the harvest and understory burning actions. Ponderosa pine would be re-established (planted) in one previously harvested stand.

The proposed action is designed to change the multi-storied composition of a portion of the project area, which would reduce the high risk of insect infestation. This change would occur with the proposed harvest and understory burning actions.

Establishing park-like timber stands through harvest and understory burning would increase and improve forage. Improving forage may attract elk and mule deer from private land during a portion of winter, and thereby reduce big game damage conflicts.

2. **Provide timber from the suitable lands in the French Gulch project area in response to society's demands for wood fiber. This would contribute to the even flow and continuous supply of timber from timber suitable lands on Deerlodge National Forest.**

The demand for National Forest timber in southwest Montana is high as a result of regional shortages. Recent bid rates on Forest Service timber sales in the local area have produced some of the highest bids ever recorded for National Forest timber in this area. The supply of timber from Deerlodge National Forest is important to the local timber industry (Forest Plan, ROD, page 18). The wood products industry is also recognized as a significant part of the local economy (Forest Plan, page VI-2).

This project also contributes to Deerlodge National Forest's Allowable Sale Quantity (ASQ) as identified in the Forest Plan, Appendix E, and Forest Plan, ROD, pp. 7, 18, and 19. The ASQ was determined, in part, by the timber supply needs of the local timber industry (Forest Plan, ROD, p. 18).

THE DECISION

It is my decision to implement a modified Alternative B which was detailed in the supplementary information letter of March 1, 1993, and in the EA as described for Alternative B. Implementation of this alternative will include 347 acres of commercial thin and 25 acres of clearcut timber harvest, 1,164 acres of understory burning outside of timber harvest units, 48 acres of ponderosa pine planting, 7.1 miles of seasonal road restrictions, and 18.4 miles of year-long road restrictions. For additional detail on Modified Alternative B, see section entitled "Alternatives Considered" in this Decision Notice.

My decision considers analysis disclosed in the EA, the information in the supplementary information letter, the Biological Evaluations (Attachment 1), the public comments received on the EA, and the North Flints LEU analysis.

Implementation of this decision is planned to take place in several stages; the timber sale is the first and is planned to be sold in 1993. The travel management changes will be incorporated into the 1993 scheduled Deerlodge Forest Travel Plan update. Other activities will be implemented as early as 1994.

The 7.1 miles that will be closed seasonally consist of the following roads. Motorized vehicle traffic will be restricted during the periods of October 15th through December 1st and April 1st through June 15th.

- 3.6 miles of Forest Roads 666 and 78608 (main Gird Creek Road, entire length)
- 2.0 miles of Forest Road 5152 (Jones Mountain Road, from top of Jones Mountain west to the junction of Forest Road 1557; on the east side of Jones Mountain, no restrictions will be imposed from Crevice Creek north to the junction of 1557)
- 1.5 miles of Forest Road 5151 (Lone Tree Hill Road, from top of Lone Tree Hill west to junction of Forest Road 1557)

These restrictions are being implemented to increase elk security during the fall big game hunting seasons and the spring elk calving season.

The 18.4 miles of Forest roads which will be restricted yearlong to motorized vehicle traffic, with the exception of snowmobile use, are:

- 1.5 miles of Forest Road 5151 (Lone Tree Hill Road, from top of Lone Tree Hill east to junction of 5152; recontour first 0.25 mile and various small segments)
- 1.4 miles of Forest Road 5152 (Jones Mountain Road, from top of Jones Mountain to Crevice Creek; recontour and provide erosion controls)
- 3.9 miles of Forest Roads 78472 (Davidson Creek drainage; existing gate will be moved to junction with road 636 allowing access to BPA towers and approximately 0.25 mile of the road prism behind the existing gate will be recontoured)
- 1.8 miles of Forest Roads 78477 and 78478 (recontour)
- 0.4 mile of Forest Road 78442 (recontour 0.25 mile)
- 1.3 miles of Forest Road 8511 (junction of Doney Lake Road 645 to end of road, recontour various short sections)
- 0.9 mile of Forest Road 5162 and spur
- 0.7 mile of Forest Road 78479 (recontour first 0.25 mile)
- 1.0 mile of 1557 spur (access to units 4 and 5, closed yearlong with access for logging and post-sale activities; road obliterated after administrative use)
- 2.0 miles of Forest Road 78493 (South Fork Douglas Road, from Middle Fork of Douglas Creek to end; recontour first 0.25 mile)
- 1.0 mile of Forest Road 78609 (Middle Fork Douglas Road, from Middle Fork of Douglas Creek to end; recontour first 0.25 mile)
- 2.5 miles of Forest Road 5168 (Ballard Hill Road, from junction with Emery Ridge Road 5167 to top of Ballard Hill; restrict access with gates to allow occasional administrative use)

Snowmobile use will be allowed on all year-long closures from December 2 to March 31, and will be restricted the remainder of the year.

Road access to Unit 3 will be changed. Forest Road 78479 will not be reopened to provide access to Unit 3. Instead, 0.10 mile of temporary road from Forest Road 1557 will used for hauling wood products. This changes the amount of temporary road from 2.5 miles to 2.6 miles.

As identified in the EA for Alternative B, the 2.6 miles of temporary roads necessary to harvest the units in Modified Alternative B will be closed, obliterated, and recontoured following completion of sale activities by the Forest Service. These, along with Road 1557 spur (identified above), will be closed and obliterated by the Forest Service, using monies collected from the timber sale purchaser.

While the sale is active, temporary gates will be installed by the purchaser on temporary roads accessing Units 1, 2, and 3. The 1557 spur accessing Units 4 and 5 currently has a gate. The temporary gates will be used until the completion of post-sale activities, when the obliteration of the above roads occur. The gates will then be removed.

Public access on the road accessing Units 1 and 2 will be permitted for 2 years after harvest to allow for firewood gathering from slash piles. The gates will be open between the dates of June 16 and October 14; public access will be restricted during hunting season. Public firewood will also be accessible from landing piles in Units 6 and 7 along the main Blum Creek Road (Road 1557). No other units or roads accessing units will be open for public firewood gathering.

Temporary gates on the temporary road accessing Unit 3 and the 1557 spur (access to Units 4 and 5) will be closed yearlong; the gates will be opened only for logging and post-sale activities. This is to provide protection of existing snags and to provide big game security during hunting, spring calving, and mating/ nesting seasons.

Road reconstruction of 1.0 mile of existing road is necessary for removal of forest products. The level of road reconstruction will be a single-lane road with safety turnouts and provisions for better drainage of the roadway to reduce erosion (culverts and ditches).

The modified slash treatments in Units 1 and 2 will eliminate opportunities for aspen regeneration with fire treatment. Instead, existing aspen clones in Units 1 and 2 will be cut to promote regeneration.

As stated in the EA (page II-6), no ponderosa pine will be harvested in any of the harvest units. Some ponderosa pine may be harvested with the construction of temporary roads and/or landings.

Unit sizes proposed in the EA are approximate and may vary when designated on the ground during timber sale layout.

REASONS FOR THE DECISION

Consistency with Forest Plan Standards, Goals, and Objectives

I have determined that Modified Alternative B is consistent with Forest Plan management direction as stated in the Forest Plan or as amended for EHROGA 24. This decision is contingent on approval of the site-specific amendment which exempts EHROGA 24 from meeting the Roadless Hunting Recreation Environment standard for this project.

The action will contribute toward the achievement of the desired condition in the project area by placing suitable forest lands under regulated management, while maintaining overall levels of wildlife habitat, livestock grazing, and dispersed recreation. This action will bring the existing condition into Forest Plan standards except as described below, where the existing condition is moved closer to standards.

Reasons for the Decision

1. Modified Alternative B best incorporates methods for sustaining the ecological system in the North Flints LEU. This alternative was developed with an understanding of the natural patterns and processes that occurred historically in the ecosystem (North Flints LEU analysis). Furthermore, Modified Alternative B best meets the objectives of ecosystem management for the following reasons:
    - Modified Alternative B regenerates the most ponderosa pine and quaking aspen of the action alternatives and maintains ponderosa pine communities the most.
    - Modified Alternative B minimizes the effects of fragmentation and results in the lowest degree of edge of the action alternatives.

- Commercial thinning will retain old growth characteristics on 271 acres. Maintenance of old growth ponderosa pine communities is highest of the action alternatives with Modified Alternative B.

- This alternative also contributes to the long-term strategy of managing vegetation for diversity in structure, composition, and age classes, and encourages stand vigor.

- Modified Alternative B introduces fire in the Douglas-fir zone, bringing to the North Flints ecosystem a process that occurred naturally and historically. This alternative reduces natural fuel accumulation over 1,164 acres outside timber harvest units, which is slightly less than Alternative B or D, but responds to concerns of adjacent landowners.

  Modified Alternative B and Alternative B are the only alternatives that provide a continuous fuel break across the Douglas-fir zone between private and Forest Service land.

- This alternative also reduces the infestation risk of spruce budworm and Douglas-fir beetle the most of any action alternative.

2. Modified Alternative B provides a 25-acre post and pole unit to the local small products industry.

3. Travel management objectives are best met with Modified Alternative B. With this alternative, the most roads that are no longer needed are closed yearlong and rehabilitated, eliminating resource problems (erosion) while providing a saving of administrative costs. The decision to leave Blum Creek Road open provides a good tradeoff between the public desires for motorized recreation and access and the need for security areas in the Elk Herd Unit (EHU).

4. Road obliteration and recontouring as specified for Modified Alternative B will reduce the chances of introducing noxious weeds. This, along with the mitigation measures disclosed in this Decision Notice (see Mitigation and Monitoring Measures), will help control any infestations that may become established. In addition, native seed mixes will be used, maintaining the biodiversity of native plants.

5. Modified Alternative B retains the most cover for elk security of all action alternatives with 347 acres of commercial thin and 25 acres of clearcut. The Crevice Creek security area created with Modified Alternative B is smaller than would result in Alternative B, C, or D. The existing condition, however, is improved upon, and the result is the creation of an 865-acre Crevice Creek security area and an increase in security areas of 2,871 acres in the EHU.

6. Water quality and fisheries will not be adversely impacted with the implementation of Modified Alternative B. Temporary road construction required for this alternative requires one stream crossing. Water and fish resources will be protected through incorporation of BMPs. With these protection measures, Forest Plan standards for water quality and fisheries will be met.

7. Modified Alternative B has a favorable benefit/cost ratio and positive present net value. This alternative is the best economic and ecological alternative of the action alternatives. This alternative assists in meeting the demand for wood products while contributing to the local economy, and thus addresses the timber supply and timber sale economics issue. Modified Alternative B offers an overall volume similar to the other action alternatives.

MITIGATION AND MONITORING MEASURES

Mitigation Measures

As a part of my decision, the following mitigation measures will be implemented to reduce the adverse effects of Modified Alternative B and to mitigate existing resource problems. This list is included in the EA (page II-22 to 24); detail is added below to be more specific to the selected action.

1. **Threatened, Endangered, and Sensitive Species Protection:** Timber sale contract provision CT 6.251 (Protection of Habitat of Endangered Species) will be included in the timber sale contract to protect any threatened, endangered, or sensitive plant or animal species (habitat). This provides for additional protection measures in the event new areas and/or species are discovered.

2. **Best Management Practices (BMPs):** Specific BMPs listed in Appendix 3 of the Settlement Agreement will be applied to all road construction and timber sale activities. These BMPs include physical, biological, and mechanical procedures, and scheduling and permit requirements and/or prohibitions. The goal of these BMPs is to ensure that all Forest logging or road building operations will not place or cause to be placed any wastes, i.e. soil, silt, bark, slash, debris, sidecast, or other organic or earthen materials, in a location where they are likely to violate State water quality standards. It is recognized that application of these practices will not eliminate all pollution from all land-disturbing activities. The intent of these practices is to control pollution to the extent practicable and necessary to protect beneficial uses.

3. **Sensitive Soils:** Road locations in Blum Creek that access harvest Units 3, 4, and 5 will cross soils that have low bearing strength when they are moist. Road construction and access will be permitted only during dry and/or frozen soil periods (CT6.316, Limited Operating Period).

   Harvest Units 1, 2, and portions of 4, 5, and 7 have soils developed in granitic (diorite) parent materials. Disturbed soils in these areas need special treatment to prevent erosion, i.e. careful location of roads and skidtrails so they can be properly drained.

4. **Noxious Weed Controls:** Noxious weed spread will be monitored annually along the National Forest roads leading to the timber sale area and within the timber sale area. Based on the findings of the annual evaluation, appropriate control measures will be used to minimize and control the spread of spotted knapweed.

   Timber sale contract provision CT6.26# (Noxious Weed Control) will be required in the timber sale contract. This provision will insure that loading, skidding, and harvest equipment will be cleaned prior to entering the sale area each operating season. This will help prevent the spread of noxious weeds from roadsides to skid trails and landings within the harvest units.

   Temporary road prisms will be put back to the original contour to the extent possible. This action will encourage the revegetation of the road prisms. It is expected that road locations going through the habitat types in this project area will rapidly regenerate with lodgepole pine, ponderosa pine, and Douglas-fir trees. These trees will eventually shade out any spotted knapweed that may infest the area.

5. **Timber Harvest Operating Season Restrictions:** Current vehicle access restrictions will remain in effect as shown on the 1990 Forest Visitor/Travel Map, except as stated here. Logging activities will be prohibited between October 15 and December 1 and between April 1 and June 15. These restrictions will apply to the following units and associated access roads: Units 1, 2, 3, 4, and 5. Logging will be allowed from December 2 through March 31 and June 16 to October 14. There are no time restrictions with Units 6 and 7.

   During the period September 1 to December 15, timber sale contract provisions will be used to prohibit the carrying of firearms and archery equipment in vehicles behind closed gates. Furthermore, hauling of logs on weekends and holidays from September 1 to October 15 will be prohibited.

   Also refer to Goshawk nest protection, mitigation measure #11.

6. **Snag Management:** Within all harvest units and the sale area, all existing snags (standing dead) other than lodgepole pine that do not present safety hazards will be left standing. Where other tree species are not available (densities are less than 5 per acre), lodgepole pine snags will be left for retention. In Unit 12, green snag replacements will be marked for retention in addition to the snags . All snags and snag replacement trees will be protected from harvest removal under timber sale contract clauses CT2.3#, CT2.35#, and CT6.32#.

   Within harvest units 1, 2, 6, and 7, public firewood gathering from slash piles will be permitted. If standing snags are also being cut, the Forest Service will prevent access into those units or use some other form of mitigation to prevent unacceptable damage.

7. **Livestock Controls:** If any natural barriers are removed or made ineffective from implementation of Modified Alternative B, fences will be constructed to maintain existing livestock use patterns. Installation of fences in areas where natural barriers are breached will enhance allotment management, aid in protection for reforestation, and enhance opportunities for adequate summer/fall forage for wildlife.

8. **Cultural Resources Protection:** To provide protection for known cultural resources and those yet to be discovered, contract provisions (CT6.24, Protection of Cultural Resources) will be included for both timber sale activities and road construction to protect any such findings.

9. **Elk Wallows Protection:** Although no elk wallows are currently defined within the proposed harvest units, if wallows are discovered during field layout, unit design will be altered to protect the wallows. Two sight distances (approximately 300-400 feet) will be maintained around the wallow.

10. **Contact Adjacent Landowners:** Prior to underburning activities, whether for slash disposal or natural fuels reduction, the Fire Management Officer (or other Forest Service representative) will contact adjacent landowners.

11. **Northern Goshawk Protection:** If an active goshawk nest is found during harvest operations, the nest tree will be protected and logging operations within a 30-acre area around the nest will be deferred until the nest is no longer occupied. This will be enforced with a contractual clause.

12. **Rehabilitate Existing Water Diversion:** To reduce current erosion of the streambanks and diversion ditch on Blum Creek and to maintain the stream in its natural channel, the existing water diversion will be rebuilt. Currently, Blum Creek is running along a portion of the unused diversion ditch and is eroding (undercutting) the ditch and bank in an unnatural course back to the original channel.

13. **Rehabilitate with Willow Planting:** To reduce instability resulting from the existing road crossings on a portion of Road 5162 proposed for year-long closures, willow will be planted. The planting will occur on the first-order tributary entering Blum Creek above the existing crossing in section 20. This mitigation measure would be based on availability of funds.

14. **Protection of Improvements Not Owned by the Forest Service:** Timber sale contract provision CT6.22 (Protection of Improvements Not Owned by Forest Service) will be included in the timber sale contract to protect the existing fence line along Unit 5 and other improvements such as cattleguards, water developments, fences, and claim corners. During Forest Service prescribed burning, private improvements will be protected or repaired as necessary.

15. **Buffer Strip Adjacent to Blum Creek:** Harvest in Units 4 and 5 adjacent to Blum Creek will be limited to areas outside of the riparian zone, leaving a buffer strip of 100 feet from the stream channel. Limiting harvest will meet concerns of low woody debris recruitment resulting from historic harvest activities adjacent to Blum Creek.

16. **Buffer Strip Adjacent to Private Land:** Prescriptions for harvest in Unit 2 adjacent to private land in section 14 (Jackson Park) will include leaving a buffer strip of 50 feet from the private land boundary.

17. **Protection of Improvements:** Timber sale contract provision BT6.22 (Protection of Improvements), a standard provision, will be included in the timber sale contract to protect existing fence lines and water ditches. Fence lines are located in Units 6 and 7. The water ditch is located in Unit 5.

18. **Livestock Controls:** A total of 1.5 miles of drift fence will be constructed near Unit 12 to replace the natural timber barrier lost to harvest, if monitoring of cattle movement indicates the natural barrier has been breached. (This measure is included to mitigate potential effects of Unit 12; it was listed in the EA specific to Alternatives C and D).

Monitoring Measures

It is also my decision to implement the following project-specific monitoring work (EA, page II-25 to 26):

Project implementation of activities and their effects will be monitored in accordance with the monitoring and evaluation requirements identified in Figure V-1, Forest Plan Monitoring Requirements, on pages V-4 to V-17 of the Forest Plan. Project preparation is monitored to insure appropriate Forest Plan standards and guidelines are being met and that project-specific mitigation measures are being incorporated. During and after project implementation, monitoring and evaluation continually occur to determine if any adjustments are necessary. Outputs, environmental effects, and costs are all considered in monitoring and evaluation. Project-specific monitoring and evaluation records are maintained, e.g. regeneration surveys, off-road vehicle (ORV) compliance, weed infestations, etc. Deerlodge National Forest publishes an annual monitoring and evaluation report for public distribution.

The following project-specific monitoring will be implemented if an action alternative is selected.

1. **Regeneration Surveys:** Regeneration surveys will be completed the first, third, and fifth years after site preparation to insure that each regeneration harvest unit is satisfactorily stocked with trees indigenous to the site and in compliance with National Forest Management Act (NFMA) requirements. It is also necessary to insure that the units are regenerated pursuant to the silvicultural prescription to meet the desired condition for the landscape and for MA E1.

2. **Snag Management Effectiveness Monitoring:** The effectiveness of the snag management plan will be monitored annually for 5 years after timber harvest. Snag losses will be categorized as due to natural or man-related incidents. These monitoring efforts will occur as funding is available.

3. **Owl Surveys:** Boreal and flammulated owl surveys will be conducted after timber harvest and site preparation are completed. Three surveys will be conducted, one every second year for 5 years, to monitor the presence of the owls and to determine if harvest activities impact the owls' use of the area. These monitoring efforts will occur as funding is available.

4. **BMP Implementation and Effectiveness Monitoring:** When the resource activity (i.e. timber harvesting or road construction) begins, timber sale administrators, engineering representatives, resource specialists, and others will ensure that the Best Management Practices (BMPs) are implemented as planned. BMP implementation monitoring is done before, during, and after resource activities have begun. Once BMPs have been implemented, further monitoring is done on representative sites to evaluate if BMPs are effective in meeting management objectives and protecting beneficial uses. A checklist such as the one from the R-1/R-4 "Timber Management - Sediment - Fish Issue - Monitoring Needs and Guidelines" or the "Montana Forest Practices Review Worksheet" will be used to monitor BMP implementation and assess BMP effectiveness.

5. **Noxious Weed Monitoring:** Monitoring of noxious weeds will continue annually for 5 years after the timber sale is closed. Objectives of monitoring will be detection of noxious weed infestations, with recommended treatment if warranted. These monitoring efforts will occur as funding is available.

6. **Road Restriction Effectiveness Monitoring:** Effectiveness of road restrictions will be monitored at a minimum annually for 5 years. Monitoring will be done during the fall big game season. Monitoring will be done to determine if prescribed road restriction measures were accomplished and effective. These monitoring efforts will occur as funding is available.

7. **Small Mammal and Bird Monitoring:** Changes in composition (species) and abundance of small mammals relative to changes in habitat composition and structure will be monitored. This will occur annually in a permanent plot established during 1992 and will proceed for as many years as it takes to establish the range of natural variation of population dynamics and habitat use by small mammals and their associated predators. Resident and neotropical migratory songbirds and raptors will also be surveyed annually during May and June to determine frequency of occurrence. These monitoring efforts will occur as funding is available.

8. **Fuel Load Monitoring:** Changes in composition, continuity, and arrangement of fuel loads will be monitored. In addition, vegetative and soil changes will be monitored. Monitoring will consist of field plots and photo surveys, and the timing of monitoring efforts will vary. During the first growing season after underburning, a survey will be conducted each month. Two surveys will be conducted during the second year, one at the beginning and one at the end of the growing season. During years three, five, and ten, one survey will be conducted in the middle of the growing season. These monitoring efforts will occur as funding is available.

9. **Livestock Use Monitoring:** Changes in livestock use near Unit 12 will be monitored to evaluate the need for a drift fence to replace the natural timber barrier lost to harvest.

   Under the Allotment Management Plan, cattle utilization will be monitored; the effects to the aspen being regenerated in this project will also be monitored. In the event that damage is at unacceptable levels, specific mitigation will be used which is tailored to the type of damage occurring.

KEY ISSUES

Comments received from the public scoping process along with issues identified by the Forest Service were used by the interdisciplinary team of resource specialists to determine the following key issues relative to the proposed action. These key issues were used in the formulation and comparison of the alternatives.

Issue #1 - Timber Supply and Timber Sale Economics

Issue #2 - Elk Security and Elk Hunter Opportunity

Issue #3 - Sustaining Ecological Systems and Their Components

Other issues identified during the public scoping for this proposal are addressed in the EA.

ALTERNATIVES CONSIDERED

Alternatives Considered in Detail

The following are brief descriptions of the alternatives, including Modified Alternative B:

Alternative A (No Action)

The proposed action would not be implemented with Alternative A. This alternative would defer treatment for the foreseeable future (at least 10 years). In addition to being a viable choice for the decisionmaker, this alternative serves as a "benchmark" for assessing the relative effects of the other alternatives. It allows the decisionmaker and the public to compare the overall effects of each of the action alternatives with the effects of not conducting any of the proposed actions.

The existing conditions of the French Gulch project area would be essentially maintained. Changes would occur in the area, but barring any catastrophic events (e.g. major fires, extreme weather conditions), change would occur slowly over time, being influenced primarily by natural forces. Less predictable changes could occur with management activities on private land, which encompasses 3,052 acres, or 21 percent of the project area.

Alternative B (Proposed Action)

This alternative closely resembles the initial proposed action as described in the March 4, 1992, scoping letter, and responds to the issue of sustaining ecological processes and systems.

Features Specific to Alternative B

- Avoids fragmentation of cover/landscape by concentrating units larger in scale and reducing miles of new access roads
- Concentrates and designs large units that replicate the past mosaic patterns of vegetation, characterized by complex, meandering edges and spotty, internal burn patterns as influenced by past fire activity
- Selects 347 acres of harvest units that are even-aged commercial thin and regeneration harvest types with volumes per acre averaging approximately 5 MBF

- Reduces fuel loads, provides strategic fuel breaks, and encourages ponderosa pine and quaking aspen regeneration through 347 acres of harvest units and underburning of 1,245 acres outside of the timber harvest units

- Plants 48 acres with ponderosa pine in an old 1980s harvest unit that removed most of the ponderosa pine

- Restricts motorized access seasonally on 18.6 miles and yearlong on 11.6 miles of existing road

Modified Alternative B (Selected Alternative)

This alternative is a modification of Alternative B; it better responds to some public and internal concerns relating to travel management and treatment of Units 1, 2, 12, and 14. The specifics of these changes and the effects were displayed in the supplementary information letter of March 1, 1993. This Modified Alternative B also responds to the issue of sustaining ecological processes and systems.

Features Specific to Modified Alternative B

- Avoids fragmentation of cover/landscape by concentrating units larger in scale and reducing miles of new access roads

- Concentrates and designs large units that replicate the past mosaic patterns of vegetation, characterized by complex, meandering edges and spotty, internal burn patterns as influenced by past fire activity

- Selects 372 acres of harvest units that are even-aged commercial thin and regeneration harvest types with volumes per acre averaging approximately 5 MBF

- Offers a post and pole unit to the District's small sale program

- Reduces fuel loads, provides strategic fuel breaks, and encourages ponderosa pine and quaking aspen regeneration through 347 acres of harvest units and underburning of 1,164 acres outside of the timber harvest units

- Plants 48 acres with ponderosa pine in an old 1980s harvest unit that removed most of the ponderosa pine

- Restricts motorized access seasonally on 7.1 miles and yearlong on 18.4 miles of existing road

The approach taken in developing this alternative strongly incorporates management and maintenance of the ecological system. This approach considers natural and/or human-induced processes that characterize the North Flints LEU, the range of variation in these processes, and protection and management of biological diversity within the landscape. This alternative focuses on sustaining two key components of the landscape: ponderosa pine and quaking aspen.

The harvest units were designed to be similar in some aspects to natural processes that influenced the vegetative patterns of the area in presettlement times (e.g. fire), to minimize the amount of road construction, and to minimize the fragmentation of contiguous forest habitat.

The seven commercial thin units were designed to maintain or develop large, contiguous, open-grown stands of timber that occurred with repetitive fires (10- to 30-year periodicity) in the past. After commercial thinning, five of the units (Units 1, 4, 5, 6, and 7) would retain the minimum definitions of old growth as defined for Region 1 eastside forests. The other two commercial thin units (Units 2 and 3) are in younger mixed

Douglas-fir stands. The harvest action in these units would contribute to the long-term objective of a more open-grown old growth stand structure.

The maintenance of old growth stands with commercial thins by unit number is a minor change from the EA. Overall acreage is similar, with 11-acre Unit 2 delineated from Unit 1 with field verification. Total acreage of old growth maintenance is greatest with Modified Alternative B. These changes are documented in the silvicultural prescriptions.

This alternative adds a 25-acre unit of poletimber. The post and pole unit would be sold separately from the sawtimber-sized harvest units through the District's small sale program.

Prescribed fire is included with this alternative. All harvest areas would be underburned, except Units 1 and 2. Due to concerns of adjacent landowners, Units 1 and 2 would be machine piled and burned. Changing the slash treatment in Units 1 and 2 would reduce the short-term risk of using prescribed fire, but would maintain a higher long-term risk of wildfire escaping.

In addition, approximately 1,164 acres outside of the harvest units would be underburned to reduce fuel loadings, create strategic fuel breaks, and encourage ponderosa pine and quaking aspen regeneration. Unit 17 (38 acres) would be underburned to reduce understory stocking.

Harvest units and underburning areas were designed to create a continuous fire break between private land and Forest Service land. Current fuel loadings and stand conditions in both private and federal land are conducive to a large fire event.

Spruce budworm and Douglas-fir beetle risk is at a high level within many of the harvest and underburning units. The Douglas-fir stands are multi-storied and are lightly infested with spruce budworm. The harvest and underburning would reduce the risk of spread by changing the stand structure to a single-storied stand.

The harvest and underburning would encourage the re-establishment of quaking aspen and ponderosa pine in a portion of the project area. Aspen, when seedling- and sapling-sized, is an important browse species for big game. Ponderosa pine, as a large tree in the overstory, is important to cavity-nesting birds and is structurally advantageous as a winter range cover species.

Forage, including shrubs and quaking aspen, would increase with the timber harvest and underburning actions. Improving forage may attract mule deer and elk from private land during a portion of winter.

Approximately 48 acres within underburning Unit 19 would be planted with ponderosa pine, which would supplement existing stocking. This unit was composed primarily of ponderosa pine in the past; the ponderosa pine was removed during harvest actions in the 1980s.

The configuration and silvicultural prescriptions of the harvest units were designed to minimize fragmentation of interior old growth and mature timber stands. These larger contiguous areas of coniferous cover are important to both big game and forest-interior species (e.g. goshawk, pine marten, pileated woodpecker).

Alternative C

This alternative addresses the timber supply and timber sale economics issue. Design of this alternative takes a traditional approach to roading, harvest unit dispersal, and harvest unit size (generally less than 40 acres). A less traditional approach was taken with reserve trees; all units would retain a minimum of 5 trees per acre through the next rotation. This alternative attempts to maximize the benefits versus the costs of the proposal.

Features Specific to Alternative C

- Emphasizes timber supply and timber sale economics, within the parameters of traditional harvest unit dispersal and size
- Naturally regenerates 105 acres of ponderosa pine in the landscape
- Selects 330 acres of harvest units that are regeneration harvest types with volumes per acre averaging approximately 7 MBF
- Offers a post and pole unit to the District's small sale program
- Restricts motor vehicle access seasonally on 21.7 miles and yearlong on 11.6 miles of existing road

Alternative D

The design of this alternative closely resembles Alternative B and responds to the timber supply and timber sale economics issue and to the issue of sustaining ecological processes and systems.

This alternative replicates Alternative B with changes in unit choice. In emphasizing timber supply and economics, Alternative D concentrates a patch-sized harvest unit in the subalpine fir habitat series. The harvest area (Units 11, 12, and 13) totals 54 acres and is located and designed to replicate the stand-replacing type fire patterns found in the subalpine fir zone. Although the placement of the units may not exactly imitate a landscape resulting from a wind-driven crown fire, the units would replace combinations of stands that originated from a stand-converting wildfire and would attempt to incorporate some of the visual and biological conditions resulting from a wildfire.

Features Specific to Alternative D

- Avoids fragmentation of cover/landscape by concentrating units larger in scale and reducing miles of new access roads
- Concentrates and designs large units that replicate the past mosaic patterns of vegetation, characterized by complex, meandering edges and spotty, internal burn patterns as influenced by past fire activity
- Selects 336 acres of harvest units that are even-aged commercial thin and regeneration harvest types with volumes per acre averaging approximately 6 MBF
- Reduces fuel loads, provides strategic fuel breaks, and encourages ponderosa pine and quaking aspen regeneration through 282 acres of harvest units and underburning of 1,245 acres outside of the timber harvest units
- Offers a post and pole unit to the District's small sale program
- Restricts motorized access seasonally on 21.7 miles and yearlong on 10.9 miles of existing road

Alternatives Eliminated From Detailed Analysis

Some public scoping comments suggested uneven-aged harvest methods be employed for the French Gulch proposal. Other comments centered on maximizing harvest while still meeting the intent of the purpose and need for action statements.

A site-specific silvicultural diagnosis was completed for each of the stands included in the alternatives. For each of these stands, silvicultural options, including uneven-aged and even-aged treatments, were considered in developing the recommended treatments.

Uneven-aged management was not considered a viable option due to the existing stand composition in both the Douglas-fir zone and the subalpine fir zone.

The Douglas-fir zone stands are of a structure conducive to perpetuating western spruce budworm and Douglas-fir beetle populations, populations which may result in extensive mortality. Uneven-aged management would maintain a multi-storied condition, a stand structure that maintains the climax species susceptible to western spruce budworm and Douglas-fir beetle. In addition, uneven-aged management would not maintain the open-grown stand structure envisioned with the purpose and need objectives.

The subalpine fir zone stands are composed of primarily pure lodgepole stands which are infested with dwarf mistletoe. Uneven-aged management would maintain dwarf mistletoe and reduce growth rates, reproductive capacity, and longevity by predisposing the lodgepole to attack by insects and fungi.

The stand diagnosis in Appendix B of the EA discusses the suitability of even-aged and uneven-aged management of each unit for each alternative.

Public Involvement

The scoping process formally began March 4, 1992, with a letter describing the proposed action and purpose and need to individuals, groups, adjacent landowners, and other agencies believed to be interested in this project. A news release appeared in the Montana Standard and the Philipsburg Mail, indicating that the analysis for the French Gulch Timber Sale proposal was beginning. (Letters received during the scoping process are contained in the project file, Philipsburg Ranger District.)

A second letter sent April 21, 1992, continued the scoping process. This letter scheduled an open house for April 30, 1992, at the Deer Lodge Ranger District office, Deer Lodge, Montana. This scoping effort included a description of one alternative (Alternative D) that deviates from Regional guidelines and Forest Plan standards for size of harvest unit openings.

Public involvement included numerous field reviews with adjacent landowners and interest groups, and personal contacts and correspondence with Montana Department of Fish, Wildlife, and Parks, local mill representatives, and conservation groups.

Public involvement continued September 3, 1992, with a 30-day review of the completed EA. This review period ended October 7, 1992. The comments were reviewed by the resource specialists. A discussion of each substantive comment is in the project file.

The cover letter to the EA indicated that Alternative B with modifications was expected to be the preferred action; however, little detail on these modifications was provided. A letter with information supplemental to the EA was mailed to all persons on the French Gulch mailing list on March 1, 1993. This letter identified the effects of the modifications in addition to other information. The letter requested comments by March 15. Included in this letter was the identification of my intent to approve a site-specific Forest Plan amendment to address the conditions in EHROGA 24 which do not meet Forest Plan standards. The comments received were considered in the decision for the action described in this notice.

CONSISTENCY FINDINGS

I have determined that the project is responsive to applicable and current laws and regulations guiding the planning and management of National Forest System lands.

I consider this project Environmental Assessment as appropriately tiered under the guidelines and direction of the Forest Plan and Final EIS and as prescribed under NEPA (40 CFR 1502.20). NEPA provisions have been followed as required under 40 CFR 1500.

Forest Plan Consistency

A site-specific Forest Plan amendment has been approved in conjunction with this decision. With implementation of this non-significant amendment, Modified Alternative B is consistent with the Deerlodge National Forest Plan.

Chapters II and IV of the EA and the supplementary information letter describe applicable Forest Plan standards and how they will be met.

Suitability for Timber Production

All timber harvest occurs on lands suitable for timber production. This is demonstrated in detail in the stand diagnosis in Appendix B of the French Gulch EA.

Clearcutting and Even-aged Management

I have reviewed the stand diagnoses and agree that even-aged management as prescribed in the selected alternative is appropriate to meet the objectives and requirements of the Deerlodge National Forest Plan (see description of Management Area E1 in the Forest Plan, pages III-54 to III-56).

Furthermore, the even-aged regeneration systems planned for the selected alternative are optimal for managing the Douglas-fir and lodgepole pine types and associated insects and diseases found throughout the area (36 CFR 219.27(b)(1)). These have been approved by a Certified Silviculturist.

Vegetative Manipulation

Based on the references provided below, I find that this action meets the requirements found in 36 CFR 219.27 (b).

1. **Be best suited to the goals stated in the Forest Plan.** These goals are restated in Chapter I, pages 1-4, of the EA; vegetative manipulation as a means to achieve these goals is discussed in Chapter IV, pages 15-17 and 27-32, and in Appendix B.

2. **Assure that technology and knowledge exists to adequately restock lands within 5 years after final harvest.** This is discussed in detail for Modified Alternative B in Chapter IV, pages 29-31 (includes added Unit 12). I am reasonably assured that proposed harvest units can be restocked within 5 years after final harvest. Copies of the site-specific stand prescriptions will be on file at the Philipsburg Ranger District office.

3. **Not be chosen primarily because they will give the greatest dollar return or the greatest output of timber (although these factors shall be considered).** Silvicultural practices recommended in this project area were arrived at with consideration for resource goals, biological limitations, and protection needs, and were not solely based on economics or timber output goals.

4. **Be chosen after considering potential effects on residual trees and adjacent stands.** These considerations are considered throughout the EA, but specifically in Chapter II, page 21, and Chapter IV, pages 15-17 and 27-32.

5. **Be selected to avoid permanent impairment of site productivity and to ensure conservation of soil and water resources.** These subjects are addressed in the Geology/Soils, Vegetation, Watersheds, and Fisheries sections of Chapter IV.

6. **Be selected to provide the desired effects on water quality and quantity, wildlife and fish habitat, regeneration of desired tree species, forage production, recreation uses, aesthetic values, and other resource yields.** A silvicultural stand diagnosis for French Gulch considered these requirements for Management Area E1. Target stand descriptions that were designed for this management area are contained in the diagnosis listed in Appendix B of the EA. The target stands were developed to best achieve desired conditions over the ecosystem as described in the North Flints LEU analysis.

7. **Be practical in terms of transportation and harvesting requirements and total costs of preparation, logging, and administration.** This is addressed in detail in Chapter IV, pages 2-3, and is also displayed in Appendix D.

FINDING OF NO SIGNIFICANT IMPACT

Based on my review of the analysis disclosed in the French Gulch Environmental Assessment and related documents, and my evaluation of the following factors described in 40 CFR 1508.27, I conclude that Modified Alternative B is not a federal action that will significantly affect the quality of the human environment. Based on this, an Environmental Impact Statement is not necessary and will not be prepared for this project.

Context

The setting of the proposal is in the localized areas of Gold, Dunkleberg, and Flint Creek watersheds. This vegetation management proposal was a product of the North Flints LEU analysis, which considered ecosystem processes and functions over a large area. The effects of this action are described in Chapters II and IV of the EA and in the landscape analysis, with consideration given to direct, indirect, and cumulative effects. My conclusion from these analyses is that there will be benefits in sustaining components of the ecological systems by implementing this project. The actions will be within the range of natural processes and thus will not have a significant effect to the region or society as a whole. The project is consistent with the management direction given in the Deerlodge Forest Plan.

Intensity and Severity

1. **Impacts that may be both beneficial or adverse.** The known and suspected i :cts from the action are described in Chapters II and IV of the EA. This project as a whole rs from past burning and timber sale projects on the Deerlodge National Forest due to the ent of under-burning proposed and the extent of commercial thinning in Douglas-fir stands. Tł nanagement practices, however, are not unique, and previous projects implementing these practices have not had significant effects. The effects as described in the EA are within the range of expected impacts described in the Environmental Impact Statement for the Deerlodge Forest Plan.

   Based on these known and suspected impacts associated with this project, I conclude that the intensity of the impacts will not be significant.

2. **The degree to which the proposed action affects public health or safety.** During the analysis, there was concern that the prescribed burning could impact the private property or safety in the case of escaped fire. During all prescribed burn activities, adequate procedures will be enacted which will ensure safety such as traffic control if needed, notification of adjacent landowners when burning is to occur, and timing when good smoke dispersion is expected. These will be documented in the Burn Plan. Burning near private land in section 14, T.9 N., R.12 W., will be limited to pile burning in response to public concern.

   To minimize risk to public safety during harvest activities, the timber sale contractor is required to abide by specific public health and safety requirements, including proper signing to alert the public of truck traffic, and to reduce dust problems if requested by the Forest Service.

   Based upon this information, I have concluded that the preferred action has a low risk of threatening public health or safety.

3. **Unique characteristics of the geographic area.** Based on reviews of the project area and the site-specific locations of activities, there are no unique resource characteristics identified that will be affected by this action (EA, Chapter III). None of the alternatives occur within or adjacent to a roadless area, and none of the alternatives impact any wetlands or farmlands. A cultural resource survey has been completed in the area, and the action will not affect any known sites (EA, page IV-27). The potential for impacting yet undiscovered sites is mitigated by following Forest Plan standards and using standard timber sale contract clauses.

   I conclude that there are no unique characteristics that will be impacted by the selected action.

4. **The degree to which the effects on the quality of the human environment are likely to be highly controversial.** Based on the analysis and disclosure of effects in Chapter IV of the EA, the intensity of the effects are similar to past actions. These past actions have not generated dispute as to the size, nature, or effect of the action. Therefore, I conclude that the intensity of the effects of this project are not expected to result in controversial interpretation.

5. **The degree to which the possible effects on the human environment involve unique or unknown risks.** The setting of this project is similar to areas of past management, and the types of effects identified in Chapter IV are similar to past actions. Timber harvest has occurred on the Deerlodge Forest for over 40 years, and prescribed burning has been used as a management tool for over 15 years. Common techniques for both of these activities will be used. The interdisciplinary team used the results of these past experiences as a frame of reference, and combined that insight with scientifically based information and analytical tools to estimate the effects of this proposal. There were no unique or unusual characteristics identified in this proposal that had not been previously encountered.

Based on this, I conclude that this proposal does not introduce effects that would constitute a unique or unknown risk on the human environment.

6. **The degree to which the action may establish a precedent for future actions with significant effects or represents a decision in principle about a future consideration.** Effects of this project are minor and short term in nature. Access roads to be constructed are temporary and will be obliterated after harvest and related activities (EA, page II-16), thus not creating long-term access. The closure of existing roads will alter the use, but this is not an irreversible decision.

   Thus I conclude that this action does not establish a precedent for future actions with significant effects.

7. **Whether the action is related to other actions with individually insignificant effects but significant effects when considered cumulatively.** Chapter IV of the EA discusses the combined effects of this project with other past, present, and reasonably foreseeable actions. Based on this discussion, there are no known effects which in combination with other activities would have significant effects.

8. **The degree to which the action may adversely affect districts, sites, highways, structures, or objects in or eligible for listing in the National Register of Historic Places or may cause loss or destruction of significant scientific, cultural, or historical resources.** Most of the French Gulch project area is located within the Pioneer/Gold Creek Historic District boundaries. This district is eligible for listing in the National Historic Register (EA, page III-11). A complete cultural resource inventory was completed. It was determined that the selected alternative will not affect the eligibility of the historic district to the National Register of Historic Places, and there will be no direct, indirect, auditory, or visual effects to the historic sites. The action is in compliance with Section 106 of the National Historic Preservation Act (EA, page IV-26,27). There are no other impacts to known sites, and there will be contract provisions in the timber sale contract to assure that any new sites are not adversely affected (EA, page II-23).

   Based upon this information, I conclude that the selected action will not cause loss or destruction of significant scientific, cultural, or historic resources.

9. **The degree to which the action may adversely affect an endangered or threatened species or its habitat that has been determined to be critical under the Endangered Species Act of 1973.** The results of the Biological Evaluations conducted for fish, wildlife, and plants indicated that no adverse effects will occur to threatened, endangered, or sensitive species. The Biological Evaluations are attached to this Decision Notice. Based upon these determinations, I conclude that there will be no adverse effect to species or their habitats determined to be critical under the Endangered Species Act.

10. **Whether the action threatens a violation of Federal, State, or local law or requirements imposed for the protection of the environment.** The EA discusses the project area and the effects of implementing the proposal in relation to laws and requirements for protection of the environment. Refer to the EA, pages I-4,5, II-25, III-2,9,10,21, and IV-26,27,32,39,51, for discussions on laws related to NEPA and NFMA and those for protection of water, air, cultural resources, and regeneration. Refer to the Biological Evaluations (Attachment 1) for discussions about threatened, endangered, and sensitive species. This action does not involve any riparian area harvest and is in compliance with the rules for the Montana Streamside Management Zone law, effective March 15, 1993.

    I conclude that this project is in compliance with statutes imposed for protection of the environment.

ADMINISTRATIVE REVIEW

This decision is subject to appeal pursuant to 36 CFR 217. Any written notice of appeal of this decision must be fully consistent with 36 CFR 217.9, "Content of Notice of Appeal," including the reasons for the appeal. Two copies must be filed with the Regional Forester, Federal Building, 200 East Broadway, P.O. Box 7669, Missoula, MT 59807, within 45 days of the publication of the legal notice of this decision in the Montana Standard newspaper, Butte, Montana.

Implementation may take place seven (7) days after initial publication of the Legal Notice of this decision.

ADDITIONAL INFORMATION

For additional information concerning this project, contact Rob Gump or Glenda Scott, Philipsburg Ranger Station, P.O. Box H, Philipsburg, Montana, (406) 859-3211.

Van C. Elsbernd
VAN C. ELSBERND
Forest Supervisor
Deerlodge National Forest

3-24-93
Date

Attachment 1

BIOLOGICAL EVALUATIONS

The following Biological Evaluations are for threatened, endangered, and sensitive species for the French Gulch Environmental Assessment (EA). They have been prepared by three biologists; thus, the effects for fish, wildlife, and plants are documented in three reports.

United States Department of Agriculture
Forest Service
Butte Ranger District
P.O. Box 3840
Butte, MT 59702

REPLY TO: 2670

Date: January 20,1992

SUBJECT: Biological Evaluation (Fisheries), French Gulch Timber Sale

TO: District Ranger, Deerlodge Ranger District

This Biological Evaluation for sensitive fish species addresses the proposed French Gulch Timber Sale Environmental Analysis, and more specifically the selected alternative (Alternative B with modifications) as presented in the Decision Notice.

I. Introduction

It is the Forest Service Policy to ensure that Forest Service actions do not contribute to the loss of viability of any native animal species or contribute to trends toward Federal listing of any species (FSM 2672.41) All Forest Service projects, programs, and activities are to be reviewed for possible effects on threatened, endangered, and sensitive (TE&S) species. The Biological Evaluation is the means of conducting this review and of documenting the findings.

Sensitive species are determined by the Regional Forester (FSM 2670) and are those species for which population viability is a concern. Chapter 2670 of the Forest Service Manual also specifies that management practices will be implemented to ensure that these species do not become threatened or endangered because of Forest Service actions.

III. Project Description

The selected alternative for the proposed French Gulch Timber Sale includes 347 acres of commercial thin and 25 acres of clearcut timber harvest, 1,164 acres of underburning outside of of timber harvest units, 48 acres of ponderosa pine planting, 10.6 miles of seasonal road restrictions, and 15.5 miles of year-long road restrictions. In addition the selected alternative includes 2.5 mile of temporary road construction and 1.0 miles of road reconstruction. The project area is located approximately 14 air mile north and west of Deerlodge, Montana and encompasses approximately 14,700 acres. Streams of concern within the project area include Gold Creek, Crevice Creek, Blum Creek, and Dunkleberg Creek.

IV. Analysis

The analysis included a review of current literature on the various sensitive species, review of the Montana Interagency Stream Database, and consultation with Montana Department of Fish, Wildlife and Parks fishery biologist. Field inspections were conducted during spring and summer 1992. Habitat surveys were conducted on one reach each of Blum Creek, Crevice Creek, and Dunkleberg Creek using the R1/R4 Standard Fish Habitat Inventory Procedures (Overton 1992). The remaining stream reaches in the project area were surveyed using a less intensive walkthrough survey methodology. Fish populations were sampled in Crevice and Dunkleberg Creek using a Coffelt Model Mark 10 Backpack electroshocker.

Two sensitive fish species, westslope cutthroat trout (*Oncorhrynchus clarki lewisi*) and bull trout (*Salvelinus confluentus*), may be found on the Deerlodge National Forest. Through this review it was determined that only westslope cutthroat trout occur within the project area. Genetic evaluation of westslope cutthroat populations has only been completed for Gold Creek (Hadley 1989). The population in Gold Creek showed alleles characteristic of both westslope cutthroat and rainbow trout at all loci tested and is therefore a westslope cutthroat-rainbow trout hybrid swarm. The fish populations in Crevice and Blum Creeks have not been analyzed for genetic purity. An electrofishing survey on Crevice Creek was conducted on May, 6 1992. The low number of fish captured precluded an estimate of the population. However, visual examination of the captured fish indicated them to be rainbow trout-cutthroat trout hybrids. Both Crevice and Blum Creeks are tributaries to Gold Creek. The connectivity of these streams allows movement of fish both within and between streams. Based on the above information it is my opinion that the fish in Gold, Crevice, and Blum Creeks are of the same population and therefore westslope cutthroat-rainbow trout hybrids. The fish population in Dunkleberg Creek was sampled on July 31, 1992. Visual examination indicated that these fish were potentially pure westslope cutthroat and a sample was collected for genetic analysis. The results of the genetic analysis will not be available until April 1993. Based on visual examination and isolation from hybridizing species, the population in Dunkleberg Creek is assumed to be pure for this evaluation. Since it is the only stream within the project area that supports pure strain westslope cutthroat trout, the remainder of this Biological Evaluation will be limited to Dunkleberg Creek.

Westslope cutthroat trout occur in clear, cool streams, usually with water temperatures under 65°F. Suitable habitat contains rocky, silt-free riffles for spawning and slow, deep pools for feeding and resting. Westslope cutthroat tend to occupy headwater streams and cold, clear, deep lakes with tributary streams suitable for spawning. In winter, westslope cutthroat may enter crevices in the substrate, or hide under log jams or other debris when water temperatures are below 40°F. Spawning occurs between April and July when water temperatures approach 50°F. Females construct redds in fine stream gravel (0.08 - 2.0 inches in diameter). Eggs incubate for 6-8 weeks and optimum water temperature for incubation is around 50°F. Fry and juveniles tend to be evenly distributed along stream margins in low velocity areas such as pools and runs, whereas larger westslope cutthroat prefer pools. Factors adversely affecting westslope cutthroat trout populations include hybridization with introduced rainbow trout and Yellowstone cutthroat trout, habitat degradation (including increased sedimentation of spawning and winter habitat), competition with introduced fish species, and over harvest from angling.

Effects of Past and Present Activities

Dunkleberg Creek is a tributary to the Clark Fork River, entering the Clark Fork downstream of the Forest Boundary. Stream gradient of Dunkleberg Creek ranges from 3% in the lower reaches to 6% in the reach above Diaperville meadow. Forest road #707 parallels the stream and encroaches on the channel in several locations. The abandoned Forest Rose mine site is located on a tributary to Dunkleberg Creek. Dunkleberg Creek supports a resident population of westslope cutthroat trout estimated at 124 fish larger than 4" per 1000 ft. (95% CI 120-134).

A 0.9 mile reach of Dunkleberg Creek from the Forest Boundary to the mouth of the unnamed tributary entering from the east was surveyed using the R1/R4 Standard Fish Habitat Inventory Procedures. Within this reach, the riparian vegetation consists of 26% sedge, 27% grasses, 24% woody shrubs (mostly alder), 5% coniferous tree, and 18% bare ground contained in a mixture of small shrub dominated meadows and inclusions of conifer overstory. Subtrate is dominated by fines and gravel up to 3 inches, with some cobble and small boulders (Table 1). Although cobble embededness was not measured, percent surface fines less than 0.25 inch diameter was 37%, indicating that cobble embeddedness is near the Forest Plan standard of 35%. Surface fines were slightly higher (41%) within potential spawning sites (low gradient riffles). Stream habitat types consist of 38% pools and 62% riffle by length. Pool quality in Dunkleberg Creek is less than optimal, only 16% of pool habitat was rated as good or excellent based on size, depth, and cover (Platts et al 1983). Overall streambank stability is poor (60%). Bank trampling by livestock is high where concentrated in open meadow sections of stream increasing stream width and reducing pool habitat in these areas. The low quality ratings for pool habitat is primarily due to lack of depth, indicating some filling of pools with fine sediment.

Table 1. Substrate size distribution in Dunkleberg Creek, Reach 1,2 and 3.

REACH	SAMPLE	SAND/SILT (< 0.1IN)	SM GRAVEL (0.1-.25In)	GRAVEL (0.25-3.0In)	RUBBLE (3.0-6.0In)	COBBLE (6.0-12.0IN)	BOULDER (<12.0IN)
1	SPAWNING	21	20	36	14	6	3
1	GENERAL	24	13	34	11	11	7
2	GENERAL	16	25	47	4	3	3
3	GENERAL	2	16	47	13	10	12

Past and/or present mining and grazing practices have impacted Dunkleberg Creek. The abandoned Forest Rose Mine, located on patented land on a tributary to Dunkleberg Creek, has likely been a primary contributor of sediment to Dunkleberg Creek. Percent surface fines is lower (18%) in Reach 3 of Dunkleberg Creek (Table 1), which is located above the mouth of the this tributary. Downstream of this tributary percent surface fines increases to 43% in Reach 2, and slightly decreases to 37% in Reach 1.

Regeneration of palatable woody species is very low due to continued browsing by livestock, and existing alder plants exhibit low regeneration and hedged form. Streambank trampling along open meadow sections of stream has created unstable banks due to fracturing and separation which has created a low width to depth ratio and poor pool/riffle ratio. A riparian exclosure fence was constructed along 1.5 miles of Dunkelberg Creek in 1992, extending upstream from the Forest Boundary. Exclusion of livestock impacts to this section of stream will allow for recovery of riparian vegetation. As the vegetation recovers and encroaches on the channel, natural sediment deposition/transport processes should allow for the channel to become more narrow and deepen. This in turn should allow for increased scouring of pools and reduced fine sediment in the substrate.

Direct and Indirect Effects of the Proposed Action

Two factors can affect the aquatic environment based on the proposed management activity. Additional roading can affect the amount of sediment entering streams within the analysis area. The amount of sediment contributed to stream channels from roads is dependent on road location, type of road, numbers of stream crossings and the magnitude of development. Harvest of timber adjacent to stream channels may affect stream shading and woody debris recruitment which can result in degraded instream habitat. Riparian harvest may also increase grazing impacts by increasing access of livestock if not controlled.

Road construction activities within the Dunkleberg Creek drainage are associated with harvest units 1 and 2, and include 1.0 miles of reconstruction and approximately 1.0 miles of temporary road. The temporary roads will be obliterated following harvest activity. These roads are not located immediately adjacent to any stream channel and there are no stream crossings associated with these roads. The location of the roads on gentle slopes and use of erosion control measures as outlined in the BMP's will minimize sediment delivery.

There are no harvest units affecting riparian zones adjacent to stream channels in the Dunkleberg Creek drainage. Therefore the timber harvest activities will not affect recruitment of large woody debris or stream shading. Also, grazing impacts to stream channels will not be affected by the harvest activities.

There are two underburning units associated with the proposed activity within the Dunkleberg Creek drainage. Unit 14 has been deferred as stated in the Decision Notice. Underburn Unit 20 is located on Dunkleberg Ridge over 0.25 miles away from the stream channel at its closest point. The underburn in this unit will not have any affect on Dunkleberg Creek.

Cumulative Effects

There are two additional timber sales planned for the North Flints area within the next decade. These sales are located outside of the Dunkleberg Creek watershed and will have no foreseeable affect on Dunkleberg Creek.

There are no current mining activities in the project area which affect Dunkleberg Creek. Exploration activity in the area may increase in the foreseeable future with the improvements to the road system. Due to the location of these improvements, any increase in mineral exploration resulting from these improvements should not directly affect Dunkleberg Creek.

The Forest Rose Mine has been identified as a site for potential rehabilitation by the Abandoned/Inactive Mine Inventory and Discovery Process. This inventory is a joint effort by the Forest Service and the Montana Bureau of Mines and Geology to identify abandoned mines located on or affecting Forest Service lands. If reclamation activities occurred at the Forest Rose site, they would reduce the potential of this site to adversely affect the fishery of Dunkleberg Creek.

Dunkleberg Creek is within the Hall Grazing Allotment. The allotment management plan for this allotment is scheduled for review and updating in 1994. Currently information is being gathered for the review process. Changes in management of the allotment would focus on insuring Forest Plan compliance for riparian vegetation and fisheries habitat in Dunkleberg Creek. Construction of the riparian exclosure fence on Dunkleberg Creek will reduce livestock impacts to the stream channel and fisheries habitat, and allow for vegetative recovery.

Determination of Effects

Based on the information presented above, it is my professional determination that the selected alternative for the French Gulch Environmental Analysis is not likely to adversely affect the westslope cutthroat trout population in Dunkleberg Creek. An adverse affect is defined as an action that would result in the loss of population viability or create a significant trend towards Federal listing (USDA Forest Service, 1990).

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Megahan, W. F. 1972. Sedimentation in relation to logging activities in the mountains of central Idaho. USDA Forest Service, Agric. Res. Serv. Rep. ARS-S-40. 285 pp.

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Brian W. Sanborn

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United States Department of Agriculture **Forest Service** **Deerlodge Ranger District**

91 North Frontage Road
Deerlodge, MT 59722

REPLY TO: 2670 **Date:** 11/12/92

SUBJECT: Biological Evaluation - French Gulch Timber Sale EA

TO: District Ranger, Philipsburg Ranger District

I. INTRODUCTION

It is Forest Service Policy to protect federally listed sensitive species habitat from adverse modification or destruction, as well as to protect individual organisms from harm or harassment as appropriate (FSM 2670.3). All Forest Service projects, programs, and activities are to be reviewed for possible effects on threatened, endangered, and sensitive species.

The purpose of this biological evaluation is to review the possible effects of the following proposed action on endangered, threatened, and sensitive plant species and their habitats in order to determine whether or not the proposed action may adversely affect any of these species.

II. PROJECT DESCRIPTION

The selected alternative for this project (Alternative B) involves 1,506 acres of various treatment actions, including timber harvest, underburning, and tree planting. In addition, disturbance activities will include temporary road construction and road reconstruction. The addition of unit 12, a post and pole cutting, will add 25 acres bringing the total to 1,531 acres planned for treatment.

III. PROJECT AREA ANALYSIS

The analysis of sensitive plant species for the French Gulch Timber Sale project examined potential species and habitats found only within the project area. There were no unique or special circumstances which would make analysis of a larger area necessary.

The project is located in the northern foothills of the Flint Range, T9N, R12W; T9N, R11W; T8N, R11W; and T8N, R12W. Elevations range from 5000 feet along the lower reaches of Dunkleberg Creek to 6793 feet on Jones Mountain. All aspects are represented.

The analysis for plant species of special concern included researching the databases of the Montana Heritage Program for information on plant species and plant communities. The query resulted in a finding of no known occurrences of endangered, threatened, or sensitive plant species in the project area (see accompanying letter). These results are not intended as a final statement on the occurrence of sensitive species in this area, however.

The analysis for plant species of special concern included researching landform soils maps and forest habitat maps for suitability for specific species, then conducting field reviews of areas to be affected by the selected alternative. Soils were found to be generally loamy skeletal to sandy skeletal, appearing on landform types of non-calcareous sedimentary and meta-sedimentary rocks as well as some granitics, siltstones, shales, and quartzites. Soils vary from having low, moderate, and high moisture stresses in late summer.

Forest habitat types (potential natural communities) consist primarily of Douglas fir (Pseudotsuga menziesii) habitat types with most harvest units occurring in the Douglas fir/snowberry (Pseudotsuga menziesii/ Symphoricarpos alba) habitat type. The sites are presently in seral stages consisting primarily of mature and immature Douglas fir and lodgepole pine (Pinus contorta), with some scattering overstory of Ponderosa pine (Pinus ponderosa).

In addition, the road reconstruction into Unit 3 will cross an intermittent creek. As riparian zones are often potential habitat for certain sensitive species, this area was considered for review.

A breakdown of habitat types by units is as follows:

Unit 1 and 2	Mostly Douglas fir/snowberry (Pseudotsuga menziesii/Symphoricarpos alba) with inclusions of Douglas fir/ninebark (Pseudotsuga menziesii/Physocarpus malvaceus) and Douglas fir/twinflower (Pseudotsuga menziesii/Linnaea borealis).
Unit 3 and 7	Douglas fir/snowberry.
Unit 4 and 5	Mostly Douglas fir/snowberry with inclusions of Douglas fir/twinflower.
Unit 6	Douglas fir/pinegrass and Subalpine fir/menziesii (Abies lasiocarpa/Menziesia ferruginа).
Unit 12	Douglas fir/kinnikinnick (Pseudotsuga menziesii/ Arctostaphylos uva-ursi).

The selected alternative emphasizes treatments based upon an understanding of natural patterns and strives to implement conditions similar to natural processes. Maintaining a structural mosaic and underburning are two processes incorporated into this project to accomplish these objectives. To the end that these treatments provide for a diversity of habitats, while avoiding habitat fragmentation, will contribute to the habitat niches, and niche recruitment, needed for sensitive species maintenance and their habitats.

A field review to the site was conducted when species were in an identifiable stage to determine the presence of any sensitive species. During this overview inspection, it was determined that areas to be disturbed by the harvest units provided very little habitat for species of concern. Therefore the field review concentrated mainly on random transects through riparian areas to be affected by the project. This field review resulted in a finding of no sensitive species.

IV. CONFLICT DETERMINATION

It has been determined after pre-field and field reconnaissance that there is no conflict with sensitive plant species or their habitats and the actions proposed by this project.

V. EVALUATION: STATUS OF THREATENED, ENDANGERED AND SENSITIVE PLANT SPECIES IN THE PROJECT AREA

Threatened, Endangered and Sensitive Plant Species

There are no known federally listed plant species in the area to be affected by the proposed actions of the French Gulch Timber Sale project. Federal listing refers to threatened and endangered species on record by the U.S. Fish and Wildlife Service. Additionally, there are no known species in the analysis area which appear on the U.S. Forest Service Northern Region Sensitive Species list or on the sensitive species list found in the Deerlodge Forest Plan. Although no species occurrences have been recorded, this does not mean that sensitive species or their habitats may not occur in the analysis area.

Sensitive species from the U.S. Forest Service Northern Region Sensitive Species List with the potential to be found in the analysis area and their preferred habitats are listed below:

Allotropa virgata (candystick). Occurs on granitic soils in mature conifer woodlands, most often associated with lodgepole pine, at mid- to fairly high elevations. The species seems to prefer subalpine fir/beargrass habitat types, however.

Goodyera repens (dwarf rattlesnake plantain). Occurs in open forests in the montane zone.

Ligusticum filicinum (fern-leaf lovage). Occurs in moist meadows and forest openings in the montane and subalpine zones (5400 to 8000 feet).

Veratrum californicum (California false-hellebore). Occurs in wet meadows and streambanks in the montane and subalpine zones.

In addition, the following species from the U.S. Forest Service Northern Region "watch list" may occur in the area of analysis. The "watch list" consists of plant species, subspecies, or varieties which are considered too common to be listed as sensitive, but more information is needed for certainty:

Carex multicostata (many-ribbed sedge). Occurs in meadows and open, moist to dry slopes and woods, at moderate elevations, occasionally ascending to near timberline.

In addition, the following species, listed as species of concern in the Deerlodge Forest Plan, also have the potential to be found in the analysis area:

Mimulus glabratus var. fremontii (smooth monkey-flower). Occurs along margins of ponds and streams at lower elevations.

Saxifraga integrifolia var. apetala (tiny swamp saxifrage). Occurs in meadows and moist areas from mid to high elevations.

Any sensitive species found at a later date in the project area should be protected and their habitats left undisturbed to as great an extent as possible.

VI. DETERMINATION OF EFFECTS AND CUMULATIVE EFFECTS

Based on the analysis above and a field inspection for these species and their critical habitat in the analysis area, it has been determined that there should be no effect or cumulative effects from this proposed action.

VII. DETERMINATION OF "MAY AFFECT" OR "NO EFFECT"

Implementation of this project should have no impact on any sensitive plant species. The disturbance area provides little habitat for species of concern. In addition this determination was reinforced through random field transects in the area which revealed no sightings of sensitive species or any habitat judged critical for their survival.

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BIOLOGICAL EVALUATION FOR FRENCH GULCH ENVIRONMENTAL ASSESSMENT

1/15/93

I. INTRODUCTION

It is Forest Service Policy to protect the habitat of Federally Listed threatened and endangered species, and Forest Service sensitive species from adverse modification or destruction, as well as to protect individual organisms from harm or harassment as appropriate (FSM 2670.3). All Forest Service projects, programs, and activities are to be reviewed for possible effects on threatened, endangered and sensitive (TES) species. The Biological Evaluation is the means of conducting the review and of documenting the findings. These findings are also documented in the decision notice (FSM 2672.4).

II. PROCESS

The Biological Evaluation is a 5-step process (FSM 2672.43.). The five steps consist of prefield review, field reconnaissance, conflict determination, analysis of significance and biological investigation. Evaluation of impacts on a given species may be complete at the end of step 1 or may extend through step 5.

Step One: Pre-field Review

This review is necessary to determine which animal species may be present within the project area. A review was first done to determine which species may occur on the Deerlodge National Forest and the Philipsburg Ranger District. During this process it was determined that four threatened and endangered (T&E) species may occur on the Forest and District (reference letter US Fish and Wildlife Service, 11/23/92. This listing was reconfirmed as still valid with Scot Jackson (FWS) and Bill Pomeroy (FS) via phone conversation on Oct 14, 1992). These are grizzly bear (*Ursus arctos*), northern Rocky Mountain wolf (*Canis lupis irremotus*), peregrine falcon (*Falco peregrinius anatum*) and bald eagle (*Haliaeetus leucocephalus*). In addition, ten sensitive wildlife species are known or suspected to occur on the Forest (update 5/17/91). A more site specific review was done for the proposed project area to determine which of these species might occur based on known locations or presence of required habitat(s).

Step Two: Field Reconnaissance

This part of the biological evaluation may be necessary to adequately predict what impacts this particular activity will have on a particular species. Field recon focuses on verifying availability of suitable habitat in the effected area for a "suspected or known to occur species", or to verify the presence of the species itself. With the exception of the boreal owl no other species specific surveys were conducted in the area.

Step Three: Conflict Determination

This step is used to determine if the proposed activity will impact or conflict with the habitat or use of habitat by a threatened, endangered or sensitive (TES) species. If conflict is anticipated with a threatened or endangered species, there must be consultation with the US Fish and Wildlife Service and their recommendations adopted.

Step Four: Analysis of Significant Effects

The significance of any conflict for sensitive species determined in steps above is analyzed. This may lead to a no impact or impact determination which then necessitates modification or mitigation of the project. For TES species a risk assessment is conducted and a risk index is assigned where possible. The risk assessment and risk index could help the manager make appropriate decisions to avoid jeopardizing the species and help to guide in developing alternatives.

Step Five: Biological or Botanical Investigation

This step is necessary if there is not sufficient data to determine the significance of a proposed project's effects on a species over it's entire range. This investigation is of a research nature and is not normally within the scope of the District's abilities. Depending on the species in question, this step may not even be within the scope of the Forest's abilities.

TABLE 1. The following threatened, endangered or sensitive wildlife species are either known or suspected to occur on the Deerlodge National Forest.

ANIMAL SPECIES	*STATUS*	*RESIDENT-VS-MIGRATORY*	*RECOVERY AREA?*
Rocky Mountain Wolf	Endangered	transient; future possible resident.	no
Peregrine Falcon	Endangered	migratory; planning for future breeder	yes
Bald Eagle	Endangered	migratory;possible breeder in future	yes
Grizzly Bear	Threatened	transient; possible resident	no
Boreal Owl	Sensitive	resident	NA
Ferruginous Hawk	Sensitive	migratory; possible breeder	NA
Harlequin Duck	Sensitive	migratory; possible breeder	NA
Townsend's Big-eared bat	Sensitive	possible resident, migrant	NA
Lynx	Sensitive	resident	NA
Fisher	Sensitive	resident	NA
Flammulated Owl	Sensitive	migratory; possible breeder	NA
Black-backed Woodpecker	Sensitive	resident	NA
Columbian Sharp -tailed Grouse	Sensitive	resident; possibility for reintroduction	yes-range extension
Mountain Plover	Sensitive	migrant	NA

II. HABITAT PROFILES/FOREST USE

All the references and literature used to derive the following profiles are listed and on file at the Philipsburg Ranger District Office and can be obtained through the District Wildlife Biologist. Detailed habitat requirements are not included for the T & E species but can also be found in the same file. The profiles for the sensitive species vary in detail and completeness. More information is needed to describe specific habitat requirements and management effects in the Northern Rocky ecosystems. Presently, the best known information is used and as data is collected and analyzed, updates will be made.

The **Northern Rocky Mountain Wolf** (*Canus lupus irremotus*) was eliminated from Montana around the 1920's. During the 1960's and 70's wolves were sighted several times in the Anaconda Pintlar (AP) Wilderness. Rodgers (1978) predicted that wolf use of the Deerlodge NF is likely in the form of partial hunting range and/or a north-south travel corridor. The number of wolf sightings has increased significantly from 1980 to 1990 throughout the state: from around 25 to 250. Several unconfirmed sightings during the 1980's and 90's have been reported from around the AP Wilderness and Flint Mountain Range. During 1991, five unconfirmed sightings were reported: two in the Rock Creek Lake area of the Deerlodge Ranger District, two around the Sheepshead Mountain Recreation Area (August 1991), and one in the Highlands. Follow-up visits were conducted, but no verification of authenticity was determined. According the US Fish and Wildlife Service the wolf is considered a transient on the Deerlodge National Forest, however, they do not rule out the possibility of someday having residents, especially in the area of the AP Wilderness and Flint Mountain Range. Relatively large areas, with little human activity and high density wild ungulate populations, are important to maintaining viable wolf populations. Maintenance of prey base/habitat and reducing human/wolf encounters are the most beneficial measures we can take to ensure that suitable wolf habitat is maintained (NRMW Recovery Plan).

The **Peregrine Falcon** (*Falco peregrinus anatum*) has historically used three known eyries on the Forest. A nest site survey was conducted for the Forest in the summer of 1986, using the habitat suitability index developed by Escano (1985). The results of this survey were used to identify potential sites for hacking young (Follman and Murphey 1988). Hacking/transplanting operations started in 1988 on adjacent Forests and Bureau of Land Management properties. In August of 1989 two peregrines, one adult and one immature, were observed near the Warm Springs Settling Ponds. During the summer of 1990 another sighting was reported over Elk Ridge, west of the town of Deerlodge (16 miles nw of Warm Springs Ponds). During March 1992 an adult was seen feeding on a golden-eye duck at Warm Springs Pond then seen flying toward the nearest known cliff sites in Lost Creek State Park One of the three historical eyries is at the Lost Creek Site. During summer 1991 five young birds were hacked from a site on the eastside of the Forest. This same site will be used for four more years and another will be established on the westside when funding is adequate. Maintenance of riparian areas thus providing a prey base, and protection of suitable cliff sites will be of the most benefit to peregrines.

Bald Eagle (*Haliaeetus leucocephalus*) use on the Deerlodge generally peaks during the spring and fall migrations. There are no known nest sites on the Deerlodge but the Georgetown Lake area may be providing habitat for the nonbreeding segment of the population. Bald eagles are commonly observed in the Flint and Rock Creek drainages during winter, spring and fall. The highest potential for establishment of a nesting territory occurs in and around Georgetown Lake and East Fork Reservoir. The harvest of trees greater than 20" dbh adjacent to large bodies of water should be prohibited. Observations reported between April 15 to August 15 will be evaluated to see if breeding may be occurring. Any new powerlines constructed should be made raptor-proof.

Grizzly bear (*Ursus arctos*) sightings have occurred across the Forest, with the largest number in the Tobacco Roots and Highlands. It has been hypothesized that these areas are providing spring and fall habitat but are too dry for summer habitat. In 1984, a young grizzly was shot and killed on the Deerlodge Ranger District. During the fall of 1987 a sighting occurred in the South Fork of Basin Creek by the Forest Wildlife Biologist. More recently, there were three unconfirmed sightings during the summer/fall of 1990, in the Rock Creek and Baggs Creek drainages (all these sightings are in or adjacent to the Electric Peak roadless area which is shared with the Helena National Forest). In 1991, a member of the timber stand exam crew was treed for three hours in the Baggs Creek area. A follow-up field visit verified likely grizzly bear sign (see Draft Eastside Deerlodge Landscape Unit Analysis 1992). A file is kept documenting these sightings at the Butte Ranger District Office. In general the Deerlodge has had enough credible sightings in the last few years that the US Fish and Wildlife Service believes that there are transient bears occurring and do not rule out the possibility of residents. The Deerlodge NF is located between two Federally designated recovery areas and is receiving scatted use by bears from the Greater Yellowstone Ecosystem to the south and Bob Marshall/Glacier complex to the north.

Boreal Owl (*Aegolinus funereous*) surveys are now being conducted yearly on the Forest. In 1986 four routes were surveyed (playback method) on the forest; no owls were located. During 1990, 1991 and 1992 owls have been located on both the west and east-side ranger districts. The standard regional methods are being used. Owls are being located in high-elevation, mature to old growth spruce/Douglas-fir and at times in lodgepole pine/wet meadow complexes.

Ferruginous Hawks (*Buteo regalis*) are not known to overwinter in Montana but arrive in early April. Breeding habitat is unbroken native prairie and grasslands with short or sparse vegetation. The Centennial valley to the south is known to harbor breeding Ferruginous Hawks. On the Forest several Ferruginous Hawks were observed in the Boulder River Drainage during summer 1991. The most suitable habitat is located at lower, off-forest locations in this area; maintenance of our grasslands by proper grazing management may encourage more use of the Forest lands.

The **Harlequin duck** (*Histrioncius histrioncius*) is known to breed in the Philipsburg latilong, but it is unknown whether that location was on the Deerlodge Forest (Skaar 1985). These ducks winter on the Pacific Coast but move inland to breed, arriving in late April. Harlequin ducks select streams 7-50 m wide, with a stream gradient of less than one percent with a shrub-dominated riparian zone. Log jams and overhanging vegetation are very important. Generally, the streams on the Deerlodge have a steeper gradient and may not be suitable for nesting harlequins.

The **Townsend's Big-eared Bat** (*Plecotus townsendi*) has not been documented on the Deerlodge National Forest but is suspected to use parts of it in the summer. Lewis and Clark Caverns is used for a winter hibernaculum and a breeding/nursery colony. Males and non-reproducing females disperse from this area in the summer and may be using parts of the Forest, but these individuals typically roost alone and use a variety of habitats. Surveys to document occurrence and habitat use of all species of bats began during summer of 1991. During August 1992, this species was detected at Pikes Peak Creek in the Norht Flints landscape (T. W. Butts, pers. comm.). The complete results of the two year survey will be available in June 1993.

North American Lynx (*Felis lynx canadensis*) are typically associated with extensive tracts of dense boreal forest interspersed with rocky outcrops, bogs and thickets. Their primary prey is snowshoe hare but they also consume small rodents and ground dwelling birds. Home ranges are generally around 6-8 sq mi, but range from 5-94 sq mi. Lynx and snowshoe hare exhibit the classic predator-prey cycle; hare abundance affects lynx populations mainly through recruitment rather than through direct mortality from starvation. When hare numbers are low, fewer females breed, litters are smaller and survival of kits is low. Early successional stages with high densities of shrubs and seedlings are optimal for hares and subsequently important for lynx. Mature and old-growth spruce-fir forest stands are used for denning and travel corridors. The main threat to lynx populations is forest fragmentation from timber harvest causing loss of denning habitat and corridors. Road development can increase trapping access pressure and poaching. Management sensitivity to lynx would include: keeping road density below 1 mi/sq mi, maintaining connectivity between cover patches with linkages being no less than 300 ft wide, and providing dense stands of conifers interspersed with openings no farther than 300 ft from the middle of the opening to cover. The Forest began conducting lynx surveys during winter of 1991-92 in the Fleecer Mountian/Mount Haggin Area and will continue to do so in the future. Other Landscape Units will be surveyed in the future.

Fisher (*Martes pennanti*) are cat-sized members of the weasel family. This species is primarily a predator and diet consists of small mammals such as snowshoe hares, squirrels, shrews, mice and porcupines. They will also eat birds, eggs, reptiles, amphibians, fish, insects, carrion, fruits, nuts and berries. Fisher prefer extensive continuous canopies including lowland forests or mature to old-growth spruce-fir with high canopy closure. They usually avoid open meadows, grasslands and clearcuts. "Optimal" fisher habitat seems to be large, suitable areas of 245 acres or greater interconnected with other large areas of the same. Dense understories of young conifers, shrubs and herbaceous cover is needed in summer. Dens are found in hollow logs, brush or rock piles, tree nests, or burrows. Overtrapping and habitat destruction from logging and settlement has constricted their ranges. Currents threats include forest fragmentation which reduces the size of suitable habitat/and or isolates patches. The Philipsburg District biologist observed a fisher in the Anaconda-Pintler Wilderness during the summer of 1990.

The **Flammulated Owl** (*Otus flammeolus*) is the only small forest owl with dark eyes. Breeding activities begin in early May. These birds are almost exclusively insectivorous. They are nocturnal foragers and hunt by gleaning among tree branches, hawking or capturing flying insects and pouncing on ground prey. Flammulated Owls prefer mature ponderosa pine/Douglas-fir with open canopies. They will use aspen and second growth ponderosa pine. Large diameter (>20 in) dead trees with cavities as large as Northern Flicker cavities are often a nest site characteristic. One area of the Forest on the Philipsburg Ranger District was surveyed in 1991; the North Flint Landscape Unit on the Deerlodge District will be surveyed in 1992 or thereafter.

Black-backed Woodpeckers (*Picoides arcticus*) use mature and old-growth coniferous forests usually over 3,000 ft. They are especially attracted to areas recently burned. Their diet consists of wood-boring beetles, ants and some fruit, mast and cambium. Their populations are especially sensitive to fluctuation in response to availability of burned over forests (R. Hutto, pers. comm.) It is especially helpful for this species if salvage logging is only very light after a burn, and many burned trees as possible are left in clumps. Maintain and leave corridors (at least 300 ft wide) for woodpeckers to travel between suitable patches of habitat. This species has been observed on the Philipsburg Ranger District in recent years.

Columbian Sharp-tailed Grouse (*Tympanuchus phasianellus columbianus*) were known to occur on the Deerlodge National Forest, Deerlodge Ranger District sometime in the past. The US Fish and Wildlife Service believes that they may still be there or that they could be re-introduced. This species needs large areas of undisturbed native shrub-grassland year round. Spring and fall habitat consists of mountain shrub patches and riparian shrub areas for escape cover and late summer early fall food, and sagebrush cover types with accompanying high diversity of shrubs, forbs and grasses and high structural diversity. In winter they use clumps of trees or tall shrubs along hill sides or riparian areas. They snow-burrow to conserve energy and remain safe from predators. Deterioration of native shrub-grasslands from livestock overgrazing and loss of habitat from cultivation has contributed to their decline. Management for this species needs to include protection of suitable habitat and rehabilitation of rangeland to native conditions. This is being addressed in the Eastside Deerlodge Landscape Unit Analysis presently being conducted.

Mountain Plovers (*Charadrinus montanus*) occur on prairies with short sparse vegetation and are well adapted to ground foraging in areas with little vegetation. They have been found to selectively use black-tailed prairie dog towns (on the C. M. Russel Wildlife Refuge) where the ground is mostly level with short vegetation because of cattle grazing. (see reference Olson 1984 and Knowles et al. 1982). Although the Deerlodge is replete with areas having short vegetation because of cattle grazing, thus far no surveys have been conducted.

III. EVALUATION PROCESS

The results of four of the five steps of this process are listed below for the *Forest*. The results were derived from either existing or newly collected data. Except for the T&E species, habitat profiles for the other species are not as well developed for Northern Rocky Mountain Ecosystems. The most recent available information was used in additional to the best professional judgement of the wildlife biologist. The derivation of steps 3 and 4 are shown in section V of this document. Deriving a risk index (shown in Appendix) is not always necessary depending on the results of steps 3 & 4, and Step 5 is not always necessary if the likelihood of conflict is low.

SPECIES	STEP 1 Prefield Review	STEP 2 Field Reconnaissance	STEP 3 Conflict Determination	STEP 4 Level of Significance
Rocky Mountain Wolf	Habitat present	Not recommended	None	X
Peregrine Falcon	Breeding habitat not present; Limited foraging habitat present	Not recommended	None	X
Bald Eagle	Limited foraging habitat present; Breeding habitat not present	Not recommended	None	X
Grizzly Bear	Habitat present	Not recommended	None	X
Boreal Owl	Habitat present	Project surveyed	None	X
Ferruginous Hawk	Habitat not present	X	X	X
Harlequin Duck	Habitat not present	X	X	X
Townsend's Big-eared bat	Limited habitat is present	Landscape Survey	None	X
Lynx	No habitat present	X	X	X
Fisher	No habitat present	X	X	X
Flammulated Owl	Limited habitat is present	Not recommended	Low	X
Black-backed Woodpecker	Limited habitat is present	Not recommended	Low	X
Columbian Sharptailed Grouse	Habitat not present	X	X	X
Mountain Plover	Habitat not present	X	X	X

IV. PROJECT DESCRIPTION

The Forest Service preferred alternative for the French Gulch timber sale is a modified alternative B. This alternative will harvest timber using thinning and clearcut prescriptions on 372 acres, with 2.5 miles of temporary road to be constructed. These roads will be obliterated following the sale activities. This project lies in the Gold Creek drainage, south of Gold Creek, and in the northern portion of the Flint Creek Range. These analyses and evaluations were done for the area within the project boundary and not for the entire North Flints Landscape.

V. EVALUATION: STATUS OF THREATENED, ENDANGERED AND SENSITIVE WILDLIFE SPECIES IN THE PROJECT AREA

The following analyses and discussion concerns only those species from Table 2 known or suspected or it's habitat is known or suspected to occur in the planning area or area of analysis (if different then the planning area).

1. PEREGRINE FALCON

A. BACKGROUND INFORMATION

1) **Existing Habitat Conditions**
   - a) **Analysis Area:** Planning area
   - b) **Habitat Conditions:** No suitable cliffs for nesting occur in or near the project area. The nearest cliffs identified in the 1986 study are near Squaw Rock campground in the Rock Creek drainage 30 miles west of this project.

2) **Surveys/Sightings**

   - a) **Survey Methods**
     - I. **Sampling Design:** Helicopter surveys designed to look for cliffs that would be appropriate for nesting.
     - II. **Sampling dates/times:** Spring/Summer 1986.
     - III. **Sampling Results:** No cliffs that would be suitable for nesting Peregrines were sited in the eastern portion of the Forest.
   - b) **Other Sightings:** 1989-92: several random sightings in Lost Creek/Warm Springs Creek ponds areas. No known nesting or attempts.

3) **Other Information:** Hacking attempts at Sheepshead Mountain were successful in 1991 and 92. Approximately 30 miles SE of this project.

B. ANALYSIS

1) **Projects Impacts Analysis:** Alternative B (modified) has no known effect or cumulative effects on the species or it's habitat.

2) **Risk Assessment**

   - a) **Habitat**
     - I. **Likelihood of adverse effects:** None
     - II. **Consequence of adverse effect:** None
     - III. **Overall habitat risk:** None
   - b) **Individuals of the same species**
     - I. **Likelihood of adverse effects** None

II. **Consequence of adverse effect:** None
III. **Overall individual risk:** None

c) **Overall risk:** None

3) **Recommendations/Options/Opportunities:** Concentrations of songbirds along riparian areas may encourage use for foraging by migrants. Riparian improvement projects would be beneficial.

2. ROCKY MOUNTAIN WOLF

A. BACKGROUND INFORMATION

1) **Existing Habitat Conditions**

a) **Analysis Area:** Planning area

b) **Habitat Conditions:** Based only on ecological needs this area could provide suitable habitat for wolves. Wolves would use a much greater area than the planning area alone. The suitability of this habitat for wolf occupancy is limited by the high level of human disturbance present.

2) **Surveys/Sightings**

a) **Survey Methods:** Given the unlikelihood of wolf occurrence, wolf inventories were not conducted in this area. Descriptions of various types of survey methods can be found on file at the Butte Ranger District.

b) **Other Sightings:** A report in 1990 was filed of a wolf in the upper Rock Creek drainage (30 miles west). In 1991, there were 2 reports of wolves near Rock Creek Lake area (8 miles east).

3) **Other Information:** None

B. ANALYSIS

1) **Projects Impacts Analysis:** Even if a wolves were located near the planning area, any impact from this project would be of a low nature. This project is not having any adverse effect to big game populations which will affect wolf populations or the potential of an area to provide suitable habitat. As previously stated, relatively large areas, with little human activity and high density big game populations, are important to maintaining viable wolf populations. This proposal has no known effect or cumulative effects on the species or it's habitat.

2) **Risk Assessment**

a) **Habitat**
I. **Likelihood of adverse effects:** None
II. **Consequence of adverse effect:** None
III. **Overall habitat risk:** None

b) **Individuals of the same species**
I. **Likelihood of adverse effects** None
II. **Consequence of adverse effect:** None
III. **Overall individual risk:** None

c) **Overall risk:** None

3) **Recommendations/Options/Opportunities:** Maintaining or improving effective road closures will benefit ungulate management and thereby the prey base. Road closures also reduce the vulnerability of poaching any discovered wolves.

3. BALD EAGLE

A. BACKGROUND INFORMATION

1) **Existing Habitat Conditions**
   - a) **Analysis Area:** Planning area
   - b) **Habitat Conditions:** No suitable lakes or water bodies are available that would typically be utilized as nesting habitat. Migrants may use the area on occasion, however, no opportunities exists for foraging and little for roosting. Bald eagles tend to select night roost areas in close proximity (1-2 mi) to feeding sites (lakes, rivers etc).

2) **Surveys/Sightings:**
   - a) **Survey Methods:** No field surveys were conducted for this project.
   - b) **Other Sightings:** Migrant bald eagles have been reported along the Clark Fork River, 8 miles to the north of the planning area; and occasionally along the Flint Creek drainage to the west. Georgetown Lake has repeated sightings spring-fall, but no known nesting or roosting sites.

3) **Other Information:** There has been nesting attempts along the Clarks Fork River corridor, however it appears this water body is the attractant for these nesting sites.

B. ANALYSIS

1) **Projects Impacts Analysis:** No known effect or cumulative effects for the species or it's habitats.

2) **Risk Assessment**
   - a) **Habitat**
     - I. **Likelihood of adverse effects:** None
     - II. **Consequence of adverse effect:** None
     - III. **Overall habitat risk:** None
   - b) **Individuals of the same species**
     - I. **Likelihood of adverse effects** None
     - II. **Consequence of adverse effect:** None
     - III. **Overall individual risk:** None
   - c) **Overall risk:** None

3) **Recommendations/Options/Opportunities:**None

4. GRIZZLY BEAR

A. BACKGROUND INFORMATION

1) **Existing Habitat Conditions**
   - a) **Analysis Area:** Flint Creek Range
   - b) **Habitat Conditions:** In the planning area alone, human disturbance is too high to provide suitable permanent habitat. Transients may use the area on occasion. The remainder of this Range may have suitable habitat components, however human uses are high, and true remote undisturbed habitats are relatively small.

2) **Surveys/Sightings**
   - a) **Survey Methods:** No specific surveys were conducted for this project.
   - b) **Other Sightings:** Sightings have been reported in 1990 in Stoney Creek (35 miles west) and Baggs Creek (20 miles east). In 1991, another Baggs Creek incident resulted in a person being treed by a grizzly.

3) **Other Information**: In 1984, a grizzly was shot west of Deer Lodge (approximately 25 miles east).

B. **ANALYSIS**

1) **Projects Impacts Analysis:** This proposal imposes no known effect or cumulative effects on the species or it's habitat.

2) **Risk Assessment**

a) **Habitat**
   - i. **Likelihood of adverse effects:** None
   - ii. **Consequence of adverse effect:** None
   - iii. **Overall habitat risk:** None

b) **Individuals of the same species**
   - i. **Likelihood of adverse effects** None
   - ii. **Consequence of adverse effect:** None
   - iii. **Overall individual risk:** None

c) **Overall risk:** None

3) **Recommendations/Options/Opportunities:** Maintaining or improving effective road closures will benefit ungulate management and also reduce the vulnerability of poaching any discovered grizzlies.

5. BOREAL OWL

A. **BACKGROUND INFORMATION**

1) **Existing Habitat Conditions**

a) **Analysis Area:** Planning area

b) **Habitat Conditions:** Suitable breeding habitat (spruce/fir) occurs in limited quantities. Harvest units are dominated by lodgepole pine and large diameter trees and snags suitable for nest sites are rare. This kind of habitat may be adequate for winter foraging only.

2) **Survey Methods**

- i. **Survey Design:** Tape recorded playback methods.
- ii. **Survey times/dates:** Spring, 1991 and 92.
- iii. **Survey Results:** Owls heard in 1991 in the Pikes Peak area; and in 1992 in North Gold Creek and Jones Mountain areas.

3) **Other Information**: None

B. **ANALYSIS**

1) **Projects Impacts Analysis:** Alternative B (modified) poses no known effect or cumulative effects on the species or species breeding habitat. The commercial thinning units may benefit winter foraging opportunities.

2) **Risk Assessment**

a) **Habitat**
   - i. **Likelihood of adverse effects:** none
   - ii. **Consequence of adverse effect:** none
   - iii. **Overall habitat risk:** none

b) **Individuals of the same species**

    - I. **Likelihood of adverse effects** none
    - II. **Consequence of adverse effect:** none
    - III. **Overall individual risk:** none
  - c) **Overall risk:** none

3) **Recommendations/Options/Opportunities:** Implementation of the snag management plan found in the document would be beneficial.

6. *FLAMMULATED OWL*

A. BACKGROUND INFORMATION

1) **Existing Habitat Conditions**
   a) **Analysis Area:** Planning area
   b. **Habitat Conditions:** This species is associated with mature ponderosa pine and Douglas fir stands commonly found within the units proposed with this alternative. Large snags are required for nesting sites. This area has potential habitats.

2) **Surveys/Sightings**

   a) **Survey Methods:** No surveys were conducted in the area. Flammulated owl playbacks were attempted during boreal owl surveys. Breeding seasons are different enough that results are not conclusive.
   b) **Other Sightings:** None.

3) **Other Information:** None

B. ANALYSIS

1) **Projects Impacts Analysis:** Alternative B (modified) imposes no known effect or cumulative effects on the species' or it's habitat.

2) **Risk Assessment**

   a) **Habitat**
      I. **Likelihood of adverse effects:** low
      II. **Consequence of adverse effect:** low
      III. **Overall habitat risk:** low
   b) **Individuals of the same species**
      I. **Likelihood of adverse effects** low
      II. **Consequence of adverse effect:** low
      III. **Overall individual risk:** low
   c) **Overall risk:** low

3) **Recommendations/Options/Opportunities:** Implementation of the snag management plan found in the document would be beneficial. The enhancement of old growth ponderosa pine stands may increase foraging opportunities for this species.

7. BLACK-BACKED WOODPECKER

A. BACKGROUND INFORMATION

1) **Existing Habitat Conditions**
   a) **Analysis Area:** Planning area
   b) **Habitat Conditions:** Habitat for this species is limited throughout the planning area and Flint Creek Range. Nesting habitat usually follows large fires which are absent in the planning area.

2) **Surveys/Sightings**

a) **Survey Methods:** No specific surveys have been conducted.
b) **Other Sightings:** None

3) **Other Information:** None

B) **ANALYSIS**

1) **Projects Impacts Analysis:** This alternative poses low to no effect or cumulative effects on the species or it's habitat.

2) **Risk Assessment**
a) **Habitat**
I. **Likelihood of adverse effects:** low
II. **Consequence of adverse effect:** low
III. **Overall habitat risk:** low
b) **Individuals of the same species**
I. **Likelihood of adverse effects** low
II. **Consequence of adverse effect:** low
III. **Overall individual risk:** low
c) **Overall risk:** low

3) **Recommendations/Options/Opportunities:** Implementation of the snag management plan found in the document would be beneficial. Creation of new snags from the proposed burning will benefit foraging opportunities.

8. TOWNSENDS BIG_EARED BAT

A. **BACKGROUND INFORMATION**

1) **Existing Habitat Conditions**
a) **Analysis Area:** Planning area
b) **Habitat Conditions:** Limited within the project area but adequate in other areas of the North Flints, especially near Pikes Peak Creek.

2) **Surveys/Sightings**

a) **Survey Methods:** Mist netting and ecolocation detectors..
b) **Other Sightings:** None

3) **Other Information:** The areas surveyed were not within the project area.
The limited funds available were used to survey areas
of most suitable habitat.

B) **ANALYSIS**

1) **Projects Impacts Analysis:** This alternative poses no effect or cumulative effects on the species or it's habitat.

2) **Risk Assessment**
a) **Habitat**
I. **Likelihood of adverse effects:** None
II. **Consequence of adverse effect:** None
III. **Overall habitat risk:** None
b) **Individuals of the same species**
I. **Likelihood of adverse effects** None

        II. **Consequence of adverse effect:** None
        III. **Overall individual risk:** None
    c) **Overall risk:** None

3) **Recommendations/Options/Opportunities:** The snag management plan may create roosting areas.

VI. DETERMINATION OF EFFECTS AND LEVEL OF SIGNIFICANCE

Based on the above analyses and results showing there is no occupied or critical habitat for any of the threatened, endangered or sensitive animal species listed above. Any conflict determinations given a low rating in Table 2 have no measurable effects and therefore a level of significance cannot be determined.

VII. DETERMINATION OF "MAY AFFECT" OR "NO EFFECT"

Implementation of this project should have "no effect" on the species or habitats listed above.

LITERATURE CITED

See file located at the Butte Ranger District Office.

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REVIEWED BY: /s/ Jina Mariani, Forest Wildlife Biologist 1-25-93 JM 1-25-93

APPENDIX
Risk Assessment (from 2673.32)

FACTOR 1.

Consequence of Adverse Effect From a Particular Activity

LOW:	None, or questionable adverse effect on habitat or population. No cumulative effects expected.
MODERATE:	Possible adverse effects in habitat or on population. Cumulative effects possible.
HIGH:	Obvious adverse effects on habitat or population. Cumulative effects possible.

FACTOR 2.

Likelihood of Adverse Effect From a Particular Activity

NONE:	Activity will not affect habitat or population (no further risk assessment needed).
LOW:	Activity controllable by seasonal or spatial restrictions and not likely to affect habitat or populations.
MODERATE	Activity not completely controllable or intense administration of project needed to prevent adverse effects on habitats or populations. Adverse effects may occur.
HIGH:	Activity not controllable and adverse effects on habitat or populations likely to occur.

Risk Index (from 2673.32)

STEP 1. Identify level of consequences and likelihood of adverse effects and apply values.

None = 0
Low = 1
Moderate = 5
High = 10

STEP 2. Multiply level of consequence times likelihood:

Value	**Action**
0	Proceed with project
1-10 (1)	Proceed as planned. Informal Consultation.
25 (2)	Modify project if feasible to reduce risk. Formal consultation if risk not reduced.
50-100	Project must be modified, cancelled or have further analysis done. Formal consultation if projects proceeds.

(1) **All reference to formal consultation apply only when federally listed species are involved (See Washington Office text).**

(2) **Subsequent activities in the assessment area with index of 25 or more must be modified if previous effects have not been mitigated.**